

STRUCTURE FILE UPDATES: 9 SEP 2009 HIGHEST RN 1181864-71-0
DICTIONARY FILE UPDATES: 9 SEP 2009 HIGHEST RN 1181864-71-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

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<http://www.cas.org/support/stngen/stndoc/properties.html>

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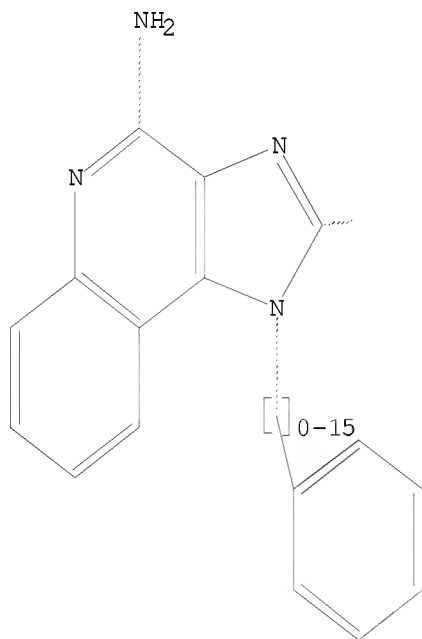
Uploading C:\Program Files\Stnexp\Queries\10596890.str

L4 STRUCTURE UPLOADED

=> d 14

L4 HAS NO ANSWERS

L4 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 14

10596890

SAMPLE SEARCH INITIATED 11:24:15 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 152 TO ITERATE

100.0% PROCESSED 152 ITERATIONS 32 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2301 TO 3779
PROJECTED ANSWERS: 301 TO 979

L5 32 SEA SSS SAM L4

=> s l4 ful
FULL SEARCH INITIATED 11:24:21 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3252 TO ITERATE

100.0% PROCESSED 3252 ITERATIONS 588 ANSWERS
SEARCH TIME: 00.00.01

L6 588 SEA SSS FUL L4

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 185.88 375.14

FILE 'CAPLUS' ENTERED AT 11:24:26 ON 11 SEP 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 11 Sep 2009 VOL 151 ISS 12
FILE LAST UPDATED: 10 Sep 2009 (20090910/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate

substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 9.

=> s 16

L7 13 L6

=> d abs bib fhitstr 1-13

L7 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN

AB Hepatitis C is becoming an increasingly common cause of mortality especially in the HIV-coinfected group. Due to the efficacy of interferon (IFN) based therapy in the treatment of hepatitis C, various compds. possessing IFN-inducing activity have been hitherto reported. In the present study, we describe how steric, electrostatic, hydrophobic, and hydrogen-bonding interactions might influence the biol. activity of a published set of IFN inducers, using a three-dimensional quant. structure-activity relation (3-D QSAR) approach. Analyses were conducted evaluating different series of compds. structurally related to 8-hydroxyadenines and 1H-imidazo[4,5-c]quinolines. A ligand-based alignment protocol in combination with the GRID/GOLPE approach was applied: 62 3-D QSAR models were derived using different GRID probes and several training sets. Performed 3-D QSAR investigations proved to be of good statistical value displaying r^2 , q^2 CV-L00, and cross-validated SDEP values of 0.73, 0.61, 0.61 and 0.89, 0.64, 0.58 using the OH or the DRY probe, resp. Addnl., the predictive performance was evaluated using an external test set of 20 compds. Analyses of the resulting models led to the definition of a pharmacophore model that can be of interest to explain the observed affinities of known compds. as well as to design novel low mol. weight IFN inducers (IFNIs). To the best of our knowledge, this is the first 3-D QSAR application on IFN-inducing agents.

AN 2009:684139 CAPLUS

DN 151:115593

TI Small-Molecule Interferon Inducers. Toward the Comprehension of the Molecular Determinants through Ligand-Based Approaches

AU Musmuca, Ira; Simeoni, Silvia; Caroli, Antonia; Ragno, Rino

CS Istituto Pasteur-Fondazione Cenci Bolognetti, Dipartimento di Chimica e Tecnologie del Farmaco, Sapienza Universita di Roma, Rome, 00185, Italy

SO Journal of Chemical Information and Modeling (2009), 49(7), 1777-1786
CODEN: JCISD8; ISSN: 1549-9596

PB American Chemical Society

DT Journal

LA English

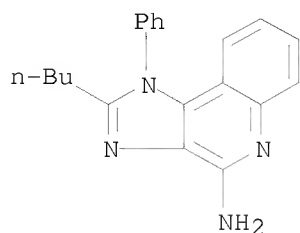
IT 853792-99-1

RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)

(small-mol. interferon inducers)

RN 853792-99-1 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 2-butyl-1-phenyl- (CA INDEX NAME)



RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN

AB The present invention provides IRM conjugates that includes an IRM moiety and a second active moiety covalently linked to the IRM moiety in which the covalent link does not depend on UV irradiation. The IRM is an imidazoquinoline amine, tetrahydroimidazoquinoline amine, imidazopyridine amine, 1,2-bridged imidazopyridine amine, 6,7-cycloalkylimidazopyridine amine, imidazonaphthyridine amine, tetrahydroimidazonaphthyridine amine, oxazoloquinoline amine, thiazoloquinoline amine, oxazolopyridine amine, thiazolopyridine amine, etc. These IRM compds. appear to act through TLRs to induce selected cytokine biosynthesis and/or co-stimulatory mols. and increase antigen-presenting capacity. The IRM conjugates are directed against e.g. tumor, viral infection, allergy, autoimmune disease and as vaccine adjuvant.

AN 2007:999273 CAPLUS

DN 147:321284

TI Antibody or antigen conjugated with immune response modifier for therapeutic use

IN Stoermer, Doris; Griesgraber, George W.; Mendoza, James D.; Bonk, Jason D.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 93 pp.

CODEN: PIXXD2

DT Patent

LA English

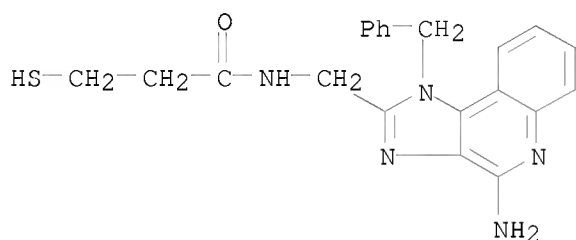
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007100634	A2	20070907	WO 2007-US4673	20070221
	WO 2007100634	A3	20071025		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
EP	1988896	A2	20081112	EP 2007-751438	20070221
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR			

US 20090035323 A1 20090205 US 2008-280472 20080822
 PRAI US 2006-775468P P 20060222
 WO 2007-US4673 W 20070221

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

IT 948029-61-6P
 RL: MOA (Modifier or additive use); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (antibody or antigen conjugated with immune response modifier for therapeutic use)
 RN 948029-61-6 CAPLUS
 CN Propanamide, N-[[4-amino-1-(phenylmethyl)-1H-imidazo[4,5-c]quinolin-2-yl]methyl]-3-mercapto- (CA INDEX NAME)



L7 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to a preparation of imidazoquinoline derivs. of formula I [wherein: R1 is (hetero)arylalk(en/yn)yl; R2 is H or a non-interfering substituent; R3 is absent, alkyl, alkoxy, OH, or halogen, etc.], useful for inducing cytokine biosynthesis (no biol. data). For instance, imidazoquinoline derivative II was prepared via addition of 3-iodopyridine to propynylimidazoquinoline derivative III.

AN 2005:638877 CAPLUS

DN 143:153376

TI A preparation of imidazoquinoline derivatives, useful as immunomodulators

IN Bonk, Jason D.; Dellaria, Joseph F., Jr.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 93 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005066170	A1	20050721	WO 2004-US42556	20041217
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,				

LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

EP 1701955 A1 20060920 EP 2004-814705 20041217

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,
 BA, HR, IS, YU

JP 2007517035 T 20070628 JP 2006-547179 20041217

US 20090030030 A1 20090129 US 2006-596890 20060628

PRAI US 2003-532982P P 20031229

WO 2004-US42556 W 20041217

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS CASREACT 143:153376; MARPAT 143:153376

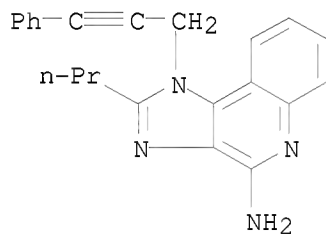
IT 1043482-41-2

RL: PRPH (Prophetic)

(A preparation of imidazoquinoline derivatives, useful as
 immunomodulators)

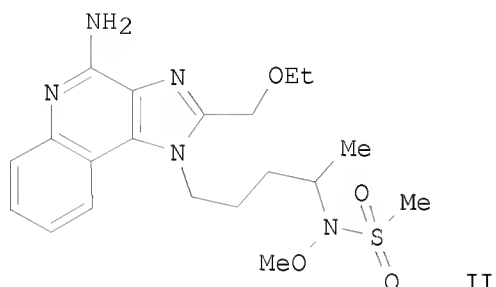
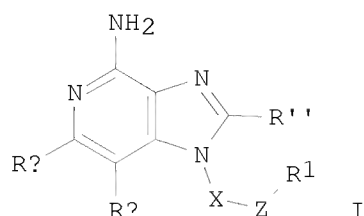
RN 1043482-41-2 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(3-phenyl-2-propyn-1-yl)-2-propyl-
 (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
 GI



AB Title compds. [I; Z = -C(:N-OR2)- or CH-N(OR2)(YR3); X = CHR9,-CH(R9)-alk(en)ylene-, etc.; R9 = H, alkyl; R1 = H, (un)substituted alkyl, alkylene/hetero/aryl, etc.; R2, R3 = independently H, (un)substituted alk(en)yl, hetero/aryl, hetero/arylalkylenyl, etc.; Y = a bond, C:O, C:S, SO2, etc.; RA, RB = independently H, halo, alk(en)yl, etc.; RACCRB = (un)substituted fused hetero/aryl, fused 5-7-membered saturated ring], were prepared as immunomodulators for inducing cytokine biosynthesis in animals and in the treatment of diseases including viral and neoplastic diseases. For example, reacting 5-[4-Amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]pentan-2-one with NH2OH•HCl in the presence of NaBH3CN/AcOH/EtOH, and substitution with mesyl anhydride gave imidazoquinoline II (m.p. = 146-148°). Certain I may modulate cytokine biosynthesis by inhibiting production of tumor necrosis factor TNF-α when tested in mouse cells (no data).

AN 2005:493478 CAPLUS

DN 143:43875

TI Preparation of hydroxylamine and oxime substituted imidazoquinolines, imidazopyridines, and imidazonaphthyridines as inducers of cytokine biosynthesis for treatment of viral and neoplastic diseases

IN Krepski, Larry R.; Dellaria, Joseph F., Jr.; Duffy, Daniel E.; Amos, David T.; Zimmermann, Bernhard M.; Squire, David J.; Marszalek, Gregory J.; Heppner, Philip D.; Kshirsagar, Tushar A.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 305 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005051324	A2	20050609	WO 2004-US39673	20041124

WO 2005051324 A3 20060105

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2004293096 A1 20050609 AU 2004-293096 20041124

CA 2547085 A1 20050609 CA 2004-2547085 20041124

EP 1686992 A2 20060809 EP 2004-812235 20041124

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS

CN 1905874 A 20070131 CN 2004-80040953 20041124

JP 2007512349 T 20070517 JP 2006-541442 20041124

US 20070099901 A1 20070503 US 2006-595859 20060518

IN 2006CN01847 A 20070608 IN 2006-CN1847 20060525

ZA 2006005216 A 20070425 ZA 2006-5216 20060623

PRAI US 2003-524961P P 20031125

US 2004-580139P P 20040616

US 2004-581293P P 20040618

WO 2004-US39673 W 20041124

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS CASREACT 143:43875; MARPAT 143:43875

IT 853227-39-1P, (E)-4-(4-Amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)-1-phenylbutan-1-one oxime

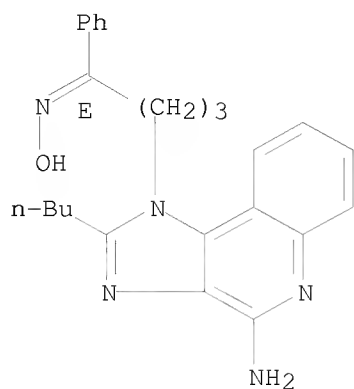
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of hydroxylamine and oxime substituted imidazoquinolines, imidazonaphthyridines, and imidazopyridines as inducers of cytokine biosynthesis for treatment of viral and neoplastic disease)

RN 853227-39-1 CAPLUS

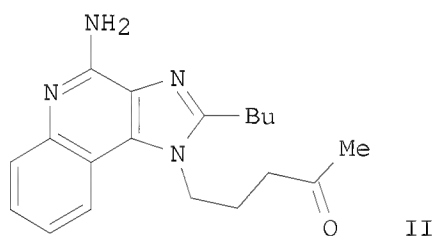
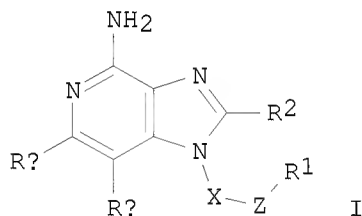
CN 1-Butanone, 4-(4-amino-2-butyl-1H-imidazo[4,5-c]quinolin-1-yl)-1-phenyl-, oxime, (1E)- (CA INDEX NAME)

Double bond geometry as shown.



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
GI



AB Title compds. [I; X = alkylene optionally interrupted by one or more -O-; Z = C(=O)-, -C(=O)O-, -C(OR3)2-; R1 = H, (un)substituted alkyl, alkylene/aryl, alkylene/heteroaryl; Q = O, S; R3 = (un)substituted alkyl, alkylene/aryl, alkylene/heteroaryl; R2 = H, (un)substituted alk(en/yn)yl, hetero/aryl, alkylenealkyl, etc.; RA, RB = independently H, halo, alk(en)yl, alkoxy, alkylthio, NH2 and derivs.; or RACCRB = (un)substituted fused aryl ring or fused 5-7-membered saturated ring; and their pharmaceutically acceptable salts], were prepared as immunomodulators for

inducing cytokine biosynthesis in animals and in the treatment of diseases including viral and neoplastic diseases. For example, II was prepared by reacting 4-(2-Butyl-1H-imidazo[4,5-c]quinolin-1-yl)butyraldehyde (preparation given) with MeMgBr, followed by oxidation, reductive amination of the ketone, oxidation with m-CPBA/reaction with NH₄OH. I have been found to induce cytokine biosynthesis by inhibiting production of tumor necrosis factor TNF- α when tested on an in vitro human blood cell system (no data).

AN 2005:490270 CAPLUS

DN 143:26611

TI Preparation of oxime substituted imidazo-containing compounds, particularly imidazoquinolines, as inducers of cytokine biosynthesis for treatment of viral and neoplastic diseases

IN Krepski, Larry R.; Dellaria, Joseph F., Jr.; Duffy, Daniel E.; Radmer, Matthew R.; Amos, David T.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 200 pp.

CODEN: PIXXD2

DT Patent

LA English

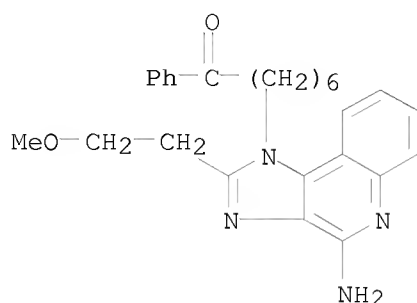
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005051317	A2	20050609	WO 2004-US39512	20041124
	WO 2005051317	A3	20060511		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2004293078	A1	20050609	AU 2004-293078	20041124
	CA 2547020	A1	20050609	CA 2004-2547020	20041124
	EP 1687307	A2	20060809	EP 2004-812098	20041124
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS			
	BR 2004016936	A	20070116	BR 2004-16936	20041124
	CN 1926138	A	20070307	CN 2004-80040954	20041124
	JP 2007512370	T	20070517	JP 2006-541697	20041124
	SG 148201	A1	20081231	SG 2008-8728	20041124
	MX 2006005910	A	20060823	MX 2006-5910	20060524
	IN 2006CN01848	A	20070608	IN 2006-CN1848	20060525
	KR 2006125818	A	20061206	KR 2006-712734	20060623
	ZA 2006005216	A	20070425	ZA 2006-5216	20060623
PRAI	US 2003-524961P	P	20031125		
	US 2004-580139P	P	20040616		
	WO 2004-US39512	W	20041124		
OS	CASREACT 143:26611; MARPAT 143:26611				
IT	1045444-40-3				
	RL: PRPH (Prophetic)				
	(Preparation of oxime substituted imidazo-containing compounds, particularly imidazoquinolines, as inducers of cytokine biosynthesis				

for treatment of viral and neoplastic diseases)

RN 1045444-40-3 CAPLUS

CN 1-Heptanone, 7-[4-amino-2-(2-methoxyethyl)-1H-imidazo[4,5-c]quinolin-1-yl]-1-phenyl- (CA INDEX NAME)



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN

AB 1H-Imidazo-[4,5-c]quinolines were prepared while investigating novel nucleoside analogs as potential antiviral agents. While these compds. showed no direct antiviral activity when tested in a number of cell culture systems, some demonstrated potent inhibition of virus lesion development in an intravaginal guinea pig herpes simplex virus-2 assay. It was determined that the in vivo antiviral activity can be attributed to the ability of these mols. to induce the production of cytokines, especially interferon (IFN), in

this model. Subsequently, it was found that the compds. also induce in vitro production of IFN in human peripheral blood mononuclear cells (hPBMCs). The in vitro results reported herein and the in vivo results reported previously led to the discovery of imiquimod which was developed as a topical agent and has been approved for the treatment of genital warts, actinic keratosis, and superficial basal cell carcinoma.

AN 2005:345257 CAPLUS

DN 143:43830

TI Synthesis and structure-activity-relationships of
1H-imidazo[4,5-c]quinolines that induce interferon production

AU Gerster, John F.; Lindstrom, Kyle J.; Miller, Richard L.; Tomai, Mark A.; Birmachu, Woubalem; Bomersine, Shannon N.; Gibson, Shiela J.; Imbertson, Linda M.; Jacobson, Joel R.; Knafla, Roy T.; Maye, Peter V.; Nikolaides, Nickolas; Oneyemi, Folakemi Y.; Parkhurst, Gwen J.; Pecore, Sharon E.; Reiter, Michael J.; Scribner, Lisa S.; Testerman, Tracy L.; Thompson, Natalie J.; Wagner, Tammy L.; Weeks, Charles E.; Andre, Jean-Denis; Lagain, Daniel; Bastard, Yvon; Lupu, Michel

CS 3M Center, 3M Pharmaceuticals, St. Paul, MN, 55144-1000, USA

SO Journal of Medicinal Chemistry (2005), 48(10), 3481-3491
CODEN: JMCMAR; ISSN: 0022-2623

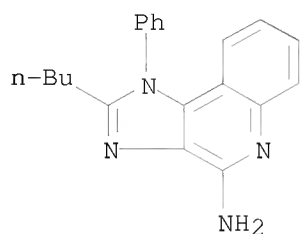
PB American Chemical Society

DT Journal

LA English

OS CASREACT 143:43830

IT 853792-99-1P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation of imidazo[4,5-c]quinoline derivs. and study of their interferon-inducing structure-activity relationship)
 RN 853792-99-1 CAPLUS
 CN 1H-Imidazo[4,5-c]quinolin-4-amine, 2-butyl-1-phenyl- (CA INDEX NAME)



OSC.G 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (21 CITINGS)
 RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. [I; R3 = (un)substituted alk(en/yn)ylene-hetero/aryl, alk(en/yn)ylene-hetero/arylene-SO-R4, alk(en/yn)ylene-hetero/arylene-alkylene-SO-R4, etc.; R4 = H, (un)substituted alk(en/yn)yl, hetero/aryl, heterocyclyl, etc.; R = alkyl, OH and derivs., halo, CF3; R', R'' = independently H, non-interfering substituent; n = 0-1; and their pharmaceutically acceptable salts], were prepared as immunomodulators for inducing cytokine biosynthesis in animals and in the treatment of diseases including viral and neoplastic diseases. For example, II was prepared via cyclocondensation 7-Benzoyloxy-N'-(2-methylpropyl)quinoline-3,4-diamine (preparation given) with tri-Me orthobutyrate, followed by oxidation and amination. Thus, I induced interferon and tumor necrosis factor in human cells (no data).

AN 2005:216680 CAPLUS

DN 142:298105

TI Preparation of aryloxy and arylalkyleneoxy substituted imidazoquinolines as inducers of cytokine biosynthesis for treatment of viral and neoplastic disease

IN Lindstrom, Kyle J.; Martin, Hugues; Merrill, Bryon A.; Rice, Michael J.; Wurst, Joshua R.; Haraldson, Chad A.; Kshirsagar, Tushar; Heppner, Philip D.; Niwas, Shri; Griesgraber, George W.; Radmer, Matthew R.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 291 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005020999	A1	20050310	WO 2004-US28021	20040827
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004268625	A1	20050310	AU 2004-268625	20040827
	CA 2536136	A1	20050310	CA 2004-2536136	20040827
	EP 1658076	A1	20060524	EP 2004-782492	20040827
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1842336	A	20061004	CN 2004-80024428	20040827
	BR 2004013998	A	20061107	BR 2004-13998	20040827
	JP 2007504161	T	20070301	JP 2006-524906	20040827
	NZ 545412	A	20081224	NZ 2004-545412	20040827
	US 20090018122	A1	20090115	US 2006-595103	20060214
	IN 2006CN00651	A	20070622	IN 2006-CN651	20060222
	MX 2006002199	A	20060522	MX 2006-2199	20060224
	KR 2007026298	A	20070308	KR 2006-703863	20060224
	ZA 2006002443	A	20070926	ZA 2006-2443	20060324
PRAI	US 2003-498270P	P	20030827		
	US 2004-581254P	P	20040618		
	WO 2004-US28021	W	20040827		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS CASREACT 142:298105; MARPAT 142:298105

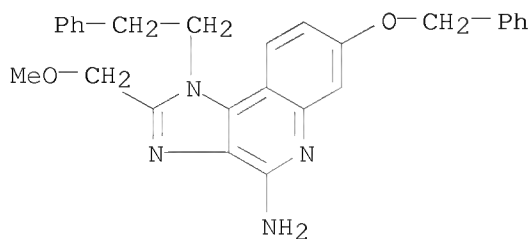
IT 847575-01-3P, 7-Benzyloxy-2-(methoxymethyl)-1-phenethyl-1H-imidazo[4,5-c]quinolin-4-amine

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(immunomodulator; preparation of aryloxy and arylalkyleneoxy imidazoquinolines as inducers of cytokine biosynthesis for treatment of viral and neoplastic disease)

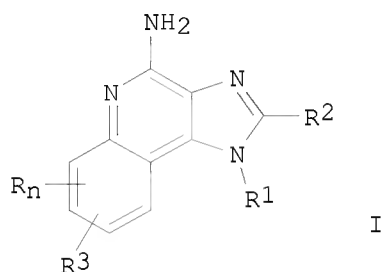
RN 847575-01-3 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 2-(methoxymethyl)-1-(2-phenylethyl)-7-(phenylmethoxy)- (CA INDEX NAME)



RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
GI



AB Title compds. I (R = alkyl, alkoxy, OH, CF₃; n = 0, 1; R₁, R₂ = H, non-interfering substituent; R₃ = ArZ, aminosulfonylaryl, aminocarbonylaryl, etc.; Ar = aryl, heteroaryl; Z = bond, alkylene, alkenylene, alkynylene) which are immunomodulators, inducing cytokines biosynthesis, and inhibiting tumor necrosis factors biosynthesis, are prepared For example, 2-butyl-1-isobutyl-7-(thiophen-3-yl)-1H-imidazo[4,5-c]quinolin-4-amine was prepared in a multi-step synthesis starting from 3-bromoaniline, tri-Et orthoformate, and Meldrum's acid. I are useful in the treatment of viral and neoplastic diseases.

AN 2004:566606 CAPLUS

DN 141:123628

TI Preparation of aryl/heteroaryl substituted imidazoquinolines as immunomodulators

IN Hays, David S.; Niwas, Shri; Kshirsagar, Tushar; Ghosh, Tarun K.; Gupta, Shalley K.; Heppner, Philip D.; Merrill, Bryon A.; Bonk, Jason D.; Danielson, Michael E.; Gerster, John F.; Haraldson, Chad A.; Johannessen, Sarah C.; Kavanagh, Maureen A.; Lindstrom, Kyle J.; Prince, Ryan B.; Radmer, Matthew R.; Rice, Michael J.; Squire, David J.; Strong, Sarah A.; Wurst, Joshua R.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 465 pp.

CODEN: PIXXD2

DT Patent

LA English

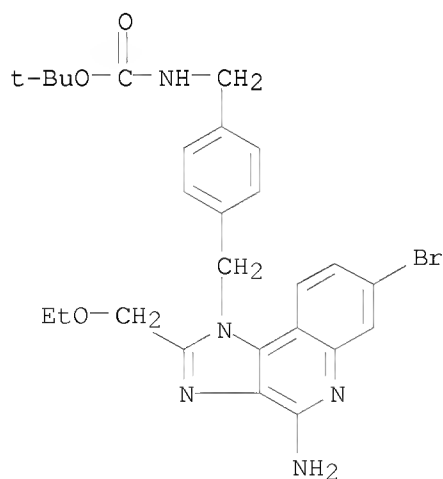
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004058759	A1	20040715	WO 2003-US40373	20031218
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

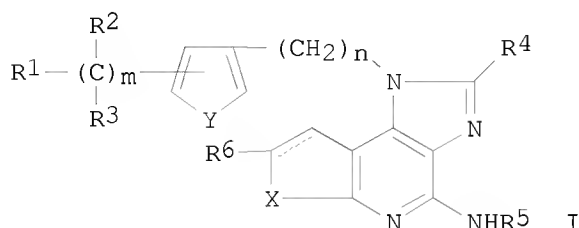
CA	2510375	A1	20040715	CA	2003-2510375	20031218
AU	2003301052	A1	20040722	AU	2003-301052	20031218
US	20040147543	A1	20040729	US	2003-739787	20031218
US	7091214	B2	20060815			
EP	1590348	A1	20051102	EP	2003-814164	20031218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK						
CN	1747953	A	20060315	CN	2003-80109659	20031218
JP	2006513212	T	20060420	JP	2004-563764	20031218
NZ	540826	A	20080731	NZ	2003-540826	20031218
MX	2005006740	A	20051005	MX	2005-6740	20050617
IN	2005CN01348	A	20070727	IN	2005-CN1348	20050620
ZA	2005005787	A	20061227	ZA	2005-5787	20050719
US	20060111387	A1	20060525	US	2006-275553	20060113
IN	2008CN00052	A	20080919	IN	2008-CN52	20080104
PRAI	US 2002-435889P	P	20021220			
	US 2003-516331P	P	20031031			
	US 2003-739787	A3	20031218			
	WO 2003-US40373	W	20031218			
	IN 2005-CN1348	A3	20050620			

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
 OS MARPAT 141:123628
 IT 723284-16-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of imidazoquinoline derivs. as immunomodulators for treatment
 of viral and antineoplastic diseases)
 RN 723284-16-0 CAPLUS
 CN Carbamic acid, [[4-[[4-amino-7-bromo-2-(ethoxymethyl)-1H-imidazo[4,5-
 c]quinolin-1-yl]methyl]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA
 INDEX NAME)



OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L7 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
GI



AB The compds. I [R1 = OR7, SO2NR8R9, CONHR8R9, NR10R11, CR12:NOH, OH, cyano; R2, R3 = H, lower alkyl; R4 = H, C1-10 linear or branched alkyl which may be substituted with ≥ 1 OH, lower alkyl, cycloalkyl, halo; R5 = H, lower alkyl; R6 = H, lower alkyl, lower alkoxy, halo; R7 = OH, lower alkyl, lower alkoxy; R8, R9 = H, lower alkyl; R10 = H, lower alkyl, benzyl; R11 = H, lower alkyl, benzyl, lower alkanesulfonyl, lower alkanoyl, (un)substituted carbamoyl, (un)substituted thiocarbamoyl, (un)substituted benzenesulfonyl; R12 = H, lower alkyl; m = 0, 1; n = 1-3; X = C1-3 alkylene, CH:CH; Y = S, CH:CH; dotted line represents an optional bond] or their pharmacol. acceptable salts are claimed. I induce synthesis of interferons and are useful as antiviral agents and anticancer agents. Human PBMCs were incubated with 0.10 $\mu\text{g/mL}$ 1-[2-(4-aminophenyl)ethyl]-1,6,7,8-tetrahydrocyclopenta[b]imidazo[4,5-d]pyridin-4-amine hydrochloride (preparation given) to produce 737 pg/mL interferon- α , vs. 62 pg/mL for a control incubated with 1-(2-phenylethyl)-1H-imidazo[4,5-c]quinolin-4-amine.

AN 1999:206895 CAPLUS

DN 130:291590

TI 1-(Substituted aryl)alkyl-1H-imidazopyridin-4-amines as interferon inducers

IN Kato, Hideo; Sakaguchi, Osamu; Aoyama, Makoto; Tsubouchi, Katsutoshi

PA Hokurika Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 78 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11080156	A	19990326	JP 1997-255926	19970904
PRAI	JP 1997-255926		19970904		
OS	MARPAT 130:291590				
IT	223257-24-7P				

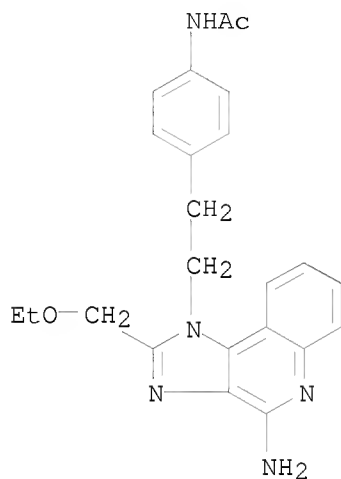
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of imidazopyridinamine derivs. as interferon inducers for

anticancer and antiviral drugs)

RN 223257-24-7 CAPLUS

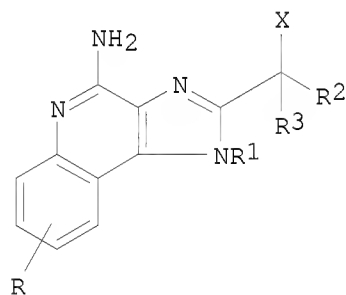
CN Acetamide, N-[4-[2-[4-amino-2-(ethoxymethyl)-1H-imidazo[4,5-c]quinolin-1-yl]ethyl]phenyl]- (CA INDEX NAME)



OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L7 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN

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I

AB 1-Substituted, 2-substituted 1H-imidazo[4,5-c]-quinolin-4-amines I [wherein R1 is selected from the group consisting of: hydroxyalkyl of one to about six carbon atoms and alkoxyalkyl wherein the alkoxy moiety is of one to about four carbon atoms and the alkyl moiety is of one to about six carbon atoms; R2 and R3 are independently selected from the group consisting of hydrogen and alkyl of one to about four carbon atoms; X is selected from the group consisting of alkoxy of one to about four carbon atoms, alkoxyalkyl wherein the alkoxy moiety is of one to about four carbon atoms and the alkyl moiety is of one to about four carbon atoms, hydroxyalkyl of one to about four carbon atoms, and hydroxy; and R is

selected from the group consisting of hydrogen, straight chain or branched chain alkoxy of one to about four carbon atoms, halogen, and straight chain or branched chain alkyl of one to about four carbon atoms; or a pharmaceutically acceptable acid addition salt thereof] are disclosed. These compds. function as antiviral agents, they induce biosynthesis of interferon, and they inhibit tumor formation in animal models. This invention also provides intermediates for preparing such compds., pharmaceutical compns. containing such compds., and pharmacol. methods of using such compds. I inhibited Herpes simplex virus type II lesions in guinea pigs and were also active against vesicular stomatitis virus in vitro. Interferon- α induction in human cells by I: at dose concentration of, e.g., 0.50 $\mu\text{g/mL}$, α reference units/mL of up to 2500 were observed Inhibition of MC-26 tumors in mice by I: at dose of 30 mg/kg, number of colonies as low as 123 ± 31 vs. 385 ± 31 for control were observed

AN 1995:420800 CAPLUS

DN 123:83363

OREF 123:14921a,14924a

TI 1-Substituted, 2-substituted 1H-imidazo[4,5-c]quinolin-4-amines as antiviral and antitumor agents and inducers of biosynthesis of interferon

IN Gerster, John F.; Crooks, Stephen L.; Lindstrom, Kyle J.

PA Minnesota Mining and Manufacturing Co., USA

SO U.S., 26 pp. Cont.-in-part of U.S. Ser. No. 838,475, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 5389640	A	19950214	US 1992-938295	19920828
	CA 2104782	A1	19920902	CA 1992-2104782	19920220
	CA 2104782	C	20010807		
	EP 872478	A2	19981021	EP 1998-105754	19920220
	EP 872478	A3	19981104		
	EP 872478	B1	20021218		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
	CA 2289219	C	20030520	CA 1992-2289219	19920220
	ZA 9201540	A	19921125	ZA 1992-1540	19920228
	IL 114570	A	19961031	IL 1992-114570	19920301
	US 5605899	A	19970225	US 1994-353802	19941212
	US 5741909	A	19980421	US 1997-789264	19970128
	US 5977366	A	19991102	US 1998-60010	19980414
	US 6348462	B1	20020219	US 1999-386486	19990827
	US 20020115861	A1	20020822	US 2001-974038	20011009
	US 6465654	B2	20021015		
	US 20030119861	A1	20030626	US 2002-238661	20020910
	US 6608201	B2	20030819		
	US 20030212270	A1	20031113	US 2003-436905	20030513
	US 6686472	B2	20040203		
	US 20040122231	A1	20040624	US 2003-731826	20031209
	US 6790961	B2	20040914		
PRAI	US 1991-662926	B2	19910301		
	US 1991-687326	B2	19910418		
	US 1992-838475	B2	19920219		
	CA 1992-2104782	A3	19920220		
	EP 1992-906763	A3	19920220		
	IL 1992-101110	A3	19920301		

US 1992-938295	A3	19920828
US 1994-353802	A3	19941212
US 1997-789264	A3	19970128
US 1998-60010	A3	19980414
US 1999-386486	A1	19990827
US 2001-974038	A3	20011009
US 2002-238661	A3	20020910
US 2003-436905	A3	20030513

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 123:83363

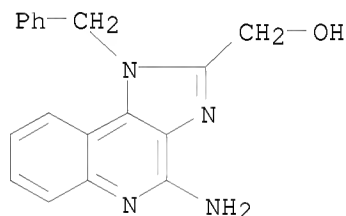
IT 144875-49-0P, 4-Amino-1-phenylmethyl-1H-imidazo[4,5-c]quinoline-2-methanol

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(1H-imidazo[4,5-c]quinolin-4-amines as antiviral and antitumor agents and inducers of biosynthesis of interferon)

RN 144875-49-0 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-2-methanol, 4-amino-1-(phenylmethyl)- (CA INDEX NAME)



OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (40 CITINGS)
 RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN

GI For diagram(s), see printed CA Issue.

AB Title compds. [I; R = H, halo, alkoxy, alkyl; R1 = H, (substituted) alkyl, alkenyl, hydroxyalkyl, alkoxyalkyl, acyloxyalkyl, PhCH2, PhCH2CH2, Ph; R2, R3 = H, alkyl (substituted) Ph; X = alkoxy, alkoxyalkyl, haloalkyl, hydroxyalkyl, alkylamido, amino, N3, Cl, OH, morpholino, pyrrolidino, alkylthio], were prepared Thus, 2-ethoxymethyl-1-(2-hydroxy-2-methylpropyl)-1H-imidazo[4,5-c]quinoline 5-oxide (preparation given) was stirred with aqueous NH3

and 4-MeC6H4SO2Cl in CH2Cl2 to give 4-amino- α ,2-dimethyl-2-ethoxymethyl-1H-imidazo[4,5-C]quinoline-1-ethanol. The latter at 3mg/kg/day, orally for 5d in mice reduced the number of MC-26 tumor colonies to 17 (vs. 55 for controls).

AN 1993:22239 CAPLUS

DN 118:22239

OREF 118:4189a,4192a

TI Preparation of 1H-imidazo[4,5-c]quinoline-4-amines as virucides, neoplasm inhibitors, and interferon inducers

IN Gerster, John F.; Crooks, Stephen L.; Lindstrom, Kyle J.

PA Minnesota Mining and Manufacturing Co., USA

SO PCT Int. Appl., 96 pp.

CODEN: PIXXD2

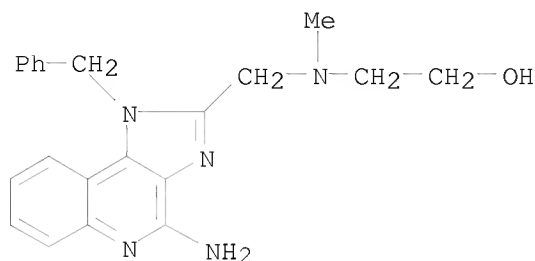
DT Patent

LA English

FAN.CNT 2

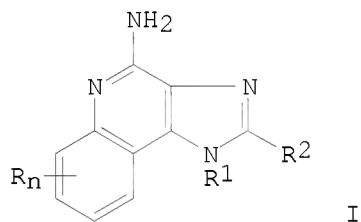
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9215582	A1	19920917	WO 1992-US1305	19920220
	W: AU, CA, CS, HU, JP, KR, NO				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	CA 2104782	A1	19920902	CA 1992-2104782	19920220
	CA 2104782	C	20010807		
	AU 9215669	A	19921006	AU 1992-15669	19920220
	AU 658621	B2	19950427		
	EP 582581	A1	19940216	EP 1992-906763	19920220
	EP 582581	B1	19990506		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
	JP 06504789	T	19940602	JP 1992-506455	19920220
	JP 2955019	B2	19991004		
	HU 67026	A2	19950130	HU 1993-2457	19920220
	HU 222111	B1	20030428		
	EP 872478	A2	19981021	EP 1998-105754	19920220
	EP 872478	A3	19981104		
	EP 872478	B1	20021218		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
	CZ 285050	B6	19990512	CZ 1993-1788	19920220
	AT 179711	T	19990515	AT 1992-906763	19920220
	ES 2131070	T3	19990716	ES 1992-906763	19920220
	SG 70625	A1	20000222	SG 1998-326	19920220
	HU 220667	B1	20020429	HU 1997-1082	19920220
	AT 229943	T	20030115	AT 1998-105754	19920220
	ES 2186034	T3	20030501	ES 1998-105754	19920220
	CA 2289219	C	20030520	CA 1992-2289219	19920220
	HU 222247	B1	20030528	HU 1997-1083	19920220
	HU 222251	B1	20030528	HU 1997-1084	19920220
	HU 222250	B1	20030528	HU 1997-1089	19920220
	ZA 9201540	A	19921125	ZA 1992-1540	19920228
	IL 101110	A	19951208	IL 1992-101110	19920301
	IL 114570	A	19961031	IL 1992-114570	19920301
	NO 9303069	A	19931101	NO 1993-3069	19930827
	NO 303729	B1	19980824		
	AU 9527157	A	19950921	AU 1995-27157	19950725
	AU 673309	B2	19961031		
PRAI	US 1991-662926	A	19910301		
	US 1991-687326	A	19910418		
	CA 1992-2104782	A3	19920220		
	EP 1992-906763	A3	19920220		
	HU 1993-2457	A	19920220		
	WO 1992-US1305	A	19920220		
	IL 1992-101110	A3	19920301		
OS	MARPAT 118:22239				
IT	144875-26-3P				
	RL: SPN (Synthetic preparation); PREP (Preparation)				
	(preparation of, as virucide and neoplasm inhibitor)				
RN	144875-26-3 CAPLUS				

CN Ethanol, 2-[[[4-amino-1-(phenylmethyl)-1H-imidazo[4,5-c]quinolin-2-yl]methyl]methylamino]- (CA INDEX NAME)



OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)
 RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
 GI



AB The title compds. [I; R = C1-4 alkyl, C1-4 alkoxy, halo; R1 = C1-10 alkyl, R3OZ, (un)substituted Ph, PhCH2, PhCH2CH2; R2 = H, C1-8 alkyl, (un)substituted Ph, PhCH2, PhCH2CH2; R3 = H, OH, C2-4 alkanoyl, Bz; Z = C1-6 alkylene; n = 1, 2] were prepared as antiviral agents, especially against herpes simplex types 1 and 2, and as an interferon inducer. 1-Isobutyl-1H-imidazo[4,5-c]quinoline (preparation given) was oxidized with H2O2 to give the 5-oxide which was chlorinated with POCl3 and treated with 50% aqueous NaOH to give 4-chloro-1-isobutyl-1H-imidazo[4,5-c]quinoline. The latter was heated at 150° in a bomb with concentrated NH4OH to give I (R1 = Me2CHCH2, R = R2 = H) (II). In female guinea pigs 5 mg II/kg intravaginally increased blood interferon activity to 31,250/mL, compared to 100-1000/mL for untreated animals. A topical antiviral cream was prepared containing II 1, Me paraben 0.2, Pr paraben 0.02, Avicel CL-611 microcryst. cellulose 5, and H2O 93.78%.

AN 1988:75403 CAPLUS

DN 108:75403

OREF 108:12475a,12478a

TI Preparation of 1H-imidazo[4,5-c]quinolin-4-amines as antiviral agents and interferon inducers

IN Gerster, John F.

PA Riker Laboratories, Inc., USA
 SO U.S., 19 pp. Cont.-in-part of U.S. Ser. No. 553,158, abandoned.
 CODEN: USXXAM

DT Patent
 LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4689338	A	19870825	US 1985-798385	19851115
	IL 73534	A	19901223	IL 1984-73534	19841116
	IL 84537	A	19901223	IL 1984-84537	19841116
	AT 84525	T	19930115	AT 1988-116137	19841116
	NO 8900822	A	19850520	NO 1989-822	19890227
	NO 165145	B	19900924		
	NO 165145	C	19910102		
	NO 8900823	A	19850520	NO 1989-823	19890227
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	NO 169437	B	19920316		
	NO 169437	C	19920624		
	NO 8900826	A	19850520	NO 1989-826	19890227
	NO 168705	B	19911216		
	NO 168705	C	19920325		
PRAI	US 1983-553158	A2	19831118		
	US 1983-553157	A	19831118		
	NO 1984-4565	A1	19841115		
	EP 1988-116137	A	19841116		
	IL 1984-73534	A	19841116		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

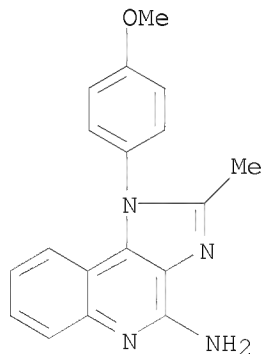
OS CASREACT 108:75403

IT 99011-11-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as virucide and immunomodulator)

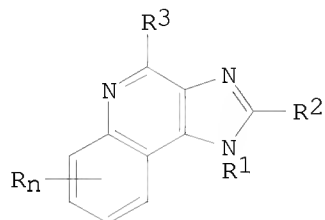
RN 99011-11-7 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(4-methoxyphenyl)-2-methyl- (CA
 INDEX NAME)



OSC.G 45 THERE ARE 45 CAPLUS RECORDS THAT CITE THIS RECORD (45 CITINGS)
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
 GI



AB Bronchospasmolytic and virucidal (no data) title compds. [I; R = alkyl, alkoxy; R1 = H, alkyl, hydroxyalkyl, (un)substituted Ph, PhCH2, PhCH2CH2, PhCHMe; R2 = H, alkyl, hydroxyalkyl, aminoalkyl, hydroxyalkyl, CF3, alkylthio, PhCH2S, SH; R3 = H, alkyl, alkoxy, alkylthio, OH, PhS, morpholino; n = 0-2] were prepared Thus, 4-chloro-3-nitroquinoline was aminolyzed with Me2CHCH2NH2 to give 4-(isobutylamino)-3-nitroquinoline. This was hydrogenated to give the diamine which was cyclocondensed with HC(OEt)3 and HCO2H to give I (R = R2 = R3 = H, R1 = Me2CHCH2). This was oxidized with H2O2 to give the imidazoquinoline 5-oxide which was refluxed with POC13 to give I (R = R2 = H, R1 = Me2CHCH2, R3 = Cl). This was heated at 150° in an autoclave with NH4OH to give I (R = R2 = H, R1 = Me2CHCH2, R3 = NH2).

AN 1985:596090 CAPLUS

DN 103:196090

OREF 103:31601a,31604a

TI 1H-Imidazo[4,5-c]quinolines and 1H-imidazo[4,5-c]quinoline-4-amines

IN Gerster, John F.

PA Riker Laboratories, Inc., USA

SO Eur. Pat. Appl., 84 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 145340	A2	19850619	EP 1984-307974	19841116
	EP 145340	A3	19860611		
	EP 145340	B1	19900124		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	CA 1271477	A1	19900710	CA 1984-467706	19841113
	AU 8435402	A	19850523	AU 1984-35402	19841114
	AU 581190	B2	19890216		
	DK 8405426	A	19850519	DK 1984-5426	19841115
	DK 164280	B	19920601		
	DK 164280	C	19921130		

NO 8404565	A	19850520	NO 1984-4565	19841115
NO 163819	B	19900417		
NO 163819	C	19900801		
ZA 8408968	A	19860625	ZA 1984-8968	19841116
EP 310950	A1	19890412	EP 1988-116137	19841116
EP 310950	B1	19930113		
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AT 49763	T	19900215	AT 1984-307974	19841116
IL 84537	A	19901223	IL 1984-84537	19841116
AT 84525	T	19930115	AT 1988-116137	19841116
JP 60123488	A	19850702	JP 1984-243142	19841117
JP 05086391	B	19931210		
US 4698348	A	19871006	US 1985-798386	19851115
AU 8929911	A	19890615	AU 1989-29911	19890214
AU 611997	B2	19910627		
NO 8900822	A	19850520	NO 1989-822	19890227
NO 165145	B	19900924		
NO 165145	C	19910102		
NO 8900823	A	19850520	NO 1989-823	19890227
NO 165146	B	19900924		
NO 165146	C	19910102		
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NO 168705	C	19920325		
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DK 169179	B1	19940905		
DK 9101358	A	19910716	DK 1991-1358	19910716
DK 164455	B	19920629		
DK 164455	C	19921116		
DK 9101359	A	19910716	DK 1991-1359	19910716
DK 165921	B	19930208		
DK 165921	C	19930628		
DK 9101360	A	19910716	DK 1991-1360	19910716
DK 164451	B	19920629		
DK 164451	C	19921109		
DK 9101361	A	19910716	DK 1991-1361	19910716
DK 164452	B	19920629		
DK 164452	C	19921109		
PRAI US 1983-553157	A	19831118		
US 1983-553158	A	19831118		
NO 1984-4565	A1	19841115		
EP 1984-307974	P	19841116		
EP 1988-116137	A	19841116		
IL 1984-73534	A	19841116		
US 1985-785773	A2	19851009		

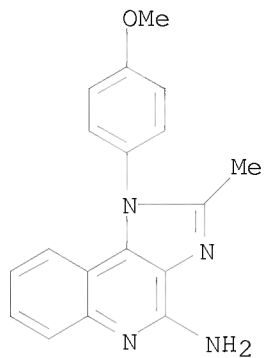
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS CASREACT 103:196090

IT 99011-11-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 99011-11-7 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(4-methoxyphenyl)-2-methyl- (CA
INDEX NAME)

OSC.G 36 THERE ARE 36 CAPLUS RECORDS THAT CITE THIS RECORD (45 CITINGS)